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ABSTRACT

A study investigated how the attribution of a problem solution to an individual or group affects the consumer's perception of the solution's quality. Based on the tendency to support group decision-making (Hydra phenomenon) it was predicted that decisions attributed to groups would be perceived as higher in quality than those made by individuals, and that members of groups would be perceived as being more credible than individuals. The subjects, 161 undergraduates enrolled in communication courses at an eastern university, were given a two-page summary of a university problem regarding the introduction of hard liquor at a campus "pub," and a summary of arguments for the change from student advocates, from neutral elements of the university administration, and from campus security opposed to the change. The decision-making process was then described in either a single author version or a version by a committee made up of faculty and students. Subjects were told that the final decision was a compromise permitting wine and champagne, but no hard liquor. Subjects were then asked to complete a 26-item Decision Quality Index. The evaluative responses clearly indicated that the group was perceived as being generally more credible than the individual, and the decision made by the group was rated higher in quality than that of the individual, supporting both hypotheses. (HTH)

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EVALUATION OF COMMUNICATION ABOUT GROUPS:

THE HYDRA PHENOMENON

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When the quality of decisions of groups and individuals has been compared empirically, group decisions have generally been found to be superior to individual decisions.[1] The majority of investigations have used quantifiable problems as dependent variables, and where group or individual decisions (as opposed to problems) have been employed, ratings of decision quality have generally indicated group superiority. The replicated findings of group superiority, then, suggest a tentative affirmation of the notion that groups are interactive and synergistic in drawing out discrete abilities of their members in the resolution of problems and the formulation of decisions.[2]

The answer to the groups vs individual question is not as clear when the variables of time and effort are considered, however, There are numerous problems and solutions which are of lesser significance than others, where the advantage of a group-formulated solution may not outweigh the additional costs and expenditures of effort which accompany group deliberation.[3] While investigations continue to probe the group vs individual superiority question, the present study focuses on the impact of communication about decision making on the consumers of decisions. Specifically, we are concerned about individual's resolution of the group vs individual question about decisions which affect their lives. How does the attribution of a problem solution to an individual or a group effect the perception of its quality, when other factors afe held constant?

The general popularity of groups for decision making is reflected in the "two heads are better than one" adage. The present study seeks to determine whether such homilies and epithets reflect a genuine belief that groups formulate better solutions than individual experts or authorities. Beyond the credibility of group members or individual decision makers, do groups possess a psychological "edge" when their decisions are announced?

Cultural Support for Groups

On the question of why people would ascribe differential amounts of credibility and quality to problem-solving decisions depending upon their collective or individual authorship, both speculative and theoretical reasons suggest that group decisions will be perceived as generally more competent, more fair, and more logical than decisions authored by individuals. In this culture, for example, criminal cases are tried and judged by juries of either nine or twelve individuals, while only a few types of civil and corporate matters are decided by a singular judge. Educational problems, from the most serious to the extremely mundane, are deliberated by boards of trustees, administrative committees, and P.T.A groups. Rarely does a single individual formulate an important decision in isolation, especially when the decision is frought with long-term educational implications. Generally, the highest level school administrator settles a dispute, or acts as the recipient of a committee's recommendations.

The majority of major cities are governed by city councils, even where the mayor possesses a large amount of power. Admissions to colleges and universities, disciplinary procedures for law enforcement officials, and permissability of player trades among major athletic organizations all represent problems which were at one time typically resolved by an individual, but have come to be resolved by committees more recently. Clearly, in this society, the tendency for major decisions to be made by groups is on the increase. This general tendency to support group decision making, even in the face of mixed evidence for the efficacy of a group, we term the "Hydra" phenomenon. We believe that the "Hydra" phenomenon operates as a rhetorical device throughout task oriented groups to perpetuate the notions that the collective wisdom of a group is a better strategy for decision making than that of employing a singular expert. In fact, if the phenomenon is as strong and pervasive as we assert, formulators of individually made decisions could enhance the credibility of their decisions by labelling them as

group decisions. It must be stressed that the hydra phenomenon operates beyond the individual credibility assigned to group members, the nature of the task, and the specific history of the group. The hydra phenomenon operates solely as an attribution of expertise to groups as opposed to individuals. Of course not all of the rhetoric of decision-making is supportive of group deliberation. "A camel is a horse designed by a committee" reflects a popular feeling that group processes are always a painful study in compromise. The compromise, for all of its negative connotations, has received "good press" in the United States. The writings of John Dewey and others are extremely supportive of group effectiveness, while the entire premise for a democratic society rests on the inherent superiority of group decisions over individual monarchies. Based on the literature review and the general assumptions previously stated, the following hypotheses were developed:

1. Decisions attributed to groups will be perceived as being significantly higher in quality than decisions attributed to individuals.
2. Members of groups will be perceived as being significantly higher in credibility than will individuals, when their decisions are studied.

To test these hypotheses, 161 undergraduates enrolled in "Introduction to Communication" and "Introduction to Mass Communication" at an eastern university were given a two-page summary of a university problem of concern to them. (Fifty undergraduates of the same institution had previously rated this topic as salient.) Subjects were told that "this is a recent summary of arguments and an administrative resolution of the arguments." They were instructed that: "The administration is extremely interested in your opinions regarding this matter, and wishes to encourage student input in future decisions."

The stimulus topic concerned the debate over the sale of hard liquor at the campus "pubs." The pub is a two year old institution at the university, which features beer and entertainment for undergraduates, and which is regulated by the university administration. Recently, many students have expressed concern over the sale of hard liquor cocktails at the pub: many students would welcome such an addition, but are quite unaware of the licensing and security problems involved in such an addition. Each subject received a two-page summary of (a) arguments for the change in policy, from the viewpoint of student advocates of the proposed change, (b) arguments from neutral elements of the university administration which cite the high cost of purchasing a liquor license, and (c) arguments from campus security officials who argue that vandalism on campus has increased since the introduction of beer sales, and would probably increase if liquor were available. Following a summary of the "pros and cons," the decision-making process itself was described: in the single author version, the decision maker was referred to as Mr. Don Jackson, president of the university faculty staff association. In the group authored version, the decision makers were described as a Dean, two faculty members, a staff member, and two students. The only difference between the two message versions was the brief introduction of the authors, and the insertion of the pronoun "he" or "the committee" where appropriate.

The next section of the message described the actual decision, which was a fairly typical compromise: In view of the enormous cost to the student body involved in the procurement of a liquor license, their request was denied. Instead, a far less expensive permit for wine and champagne was approved. This would help to accomodate those students whose favorite drink was wine, instead of beer. In view of complaints from campus security, the new "pub" was placed on three months probation. If vandalism increased markedly during the probationary period, the "pub" privilege would be suspended. In addition to this compromise, the author(s) of the decision assured the students that they would remain open to the possibility

of featuring liquor at the pub at a future time, when the students could formulate a viable plan for off-setting the cost of the license.

Following the description of the final decision, each subject was asked to complete a twenty-six item Decision Quality Index, which were statements followed by likert-type foils, ranging from "strongly agree" to "strongly disagree" (see Table 1).

These items were developed by the authors from a review of the literature concerning group decision quality, and attempted to assess the general quality of the decision, its ethical dimension, its logical or rational dimension, and the credibility of the decision maker(s). The index and sub-scales were validated by submitting them to a separate group of undergraduates, along with the materials previously described (N = 109). Analysis of scale validity revealed that, of the four proposed scales, only one, the general quality scale, was valid (Cronbach's Alpha for the seven items equaled .81). While it was apparent that the scales for the other aspects of decision evaluation require further refinement, it was also apparent thatthe general quality scale was a useful instrument for evaluating this decision with this population.

Following the administration of the stimulus materials, subjects were thanked and dismissed.

Results

Responses to the general decision quality scale for both groups were evaluated by a t-test for independent samples (one-tail). The obtained t value was significant, providing for confirmation of hypothesis one ($t = 3.29$, $df = 159$, $p < .01$).

To further probe the specific items which most differentiated the two groups, separate t-tests were computed for each scale item (see table one). Significant t values were obtained for three ofthe seven items, with all item means in the

direction predicted by hypothesis one.

Table two contains the mean credibility ratings of all subjects for either the individual or group author(s) of the decision. Examination of item means reveals that those subjects who believed that the decision was authored by a group judged the authors as being more competent, more trustworthy and less close-minded and emotional than the individualauthor. They also agreed more with the statement which read "the author(s) of this decision failed to take all evidence into account," than did the readers of the group-attributed decision. Since the credibility scale was not observed to possess validity for this population, only partial support was obtained for the second hypothesis (see Table 2).

Discussion

Clearly, the evaluative responses of subjects to the credibility dimensions of the decision maker(s) indicate thatthe group was perceived as generally more credible. The question of how or whether credibility judgments interacted with judgments of overall decision quality is an interesting one, although not specifically addressed in this study.

Given this initial support for the hydra phenonemon, future research is needed to clarify several aspects of it. First, the generality of the phenomenon warrants investigation. The stimulus problem for this study was a fairly typical resolution of a problem which was of moderate importance to a student population. What if the outcome of a group decision was a more immediate and a more socially significant problem? If the hydra effect was to manifest itself within the context of a question involving the remonstrance or punishment of an individual, e.g., a student disciplinary hearing or a faculty disciplinary matter, then the phenomenon would be as potentially generalizable as some of the findings concerning such variables as consensus vs democratic deliberation processes. The potential impact of variables such as education are relevant. Possibly, the rhetoric of group efficacy is more prevalent among those individuals with some college in their backgrounds, as

group decisions pervade the university atmosphere.

If existing research or dogmatism and close-mindedness is accurate, then it would be logical to expect dogmatics to perceive groups as generally having too much of a role in contemporary society, and to believe, in the phrasing of an item in Adorno's "F" scale, that "What America needs is a few good leaders." Dogmatics would be expected to prefer decisions made by individuals to those made by groups. Apart from the generality of the phenomenon is the question of the intensity of the hydra effect. Future research should probe the strength of the effect by investigating whether it operates when a group decision is qualitatively worse, on some preselected criteria, than a decision attributed to an individual. If a group decision was judged more favorably than the one attributed to the individual, then the effect would warrant acceptance as a major generalization with respect to the weight of small-group decision-making.

The hydra phenomenon, then, is not a variable or set of variables concerning within-group communication; it is a property of communication about groups. If a potential media manipulator were to employ the effect to affect some type of change in his readers or auditors, he would announce a decision as having been formulated by a committee or a task force whenever public acceptance ofthe decision was important. Apart from the ethical dimension, is the question of effectiveness of individual strategies of persuasion. One way to optimize any advantages of the phenomenon would be to announce that a corporate officer had struggled with a difficult question involving labor relations and was unable to find an acceptable solution. Finally, after much difficulty, the responsibility was turned over to a labor relations board who proposed the proferred solution. If the hydra phenomenon is operative, the strategy would carry a serious potential for deception.

Future research should also concentrate on the visibility of the group as a variable in producing the effect. In this study, the authorship of the decision was communicated by attribution of it to an individual or a group in a few lines of print.

If the auditor of the decision was to confront the individual author, or a member of the group, it is possible that the positive aspects of group decision making might be reinforced, or it is equally possible that the auditor could realize that a group, after all, is only an aggregate of individuals, and formulate his judgment on the merits or demerits of the individual's responses.

Future research on the hydra effect should concentrate on at least three aspects of it: (1) generality, or the degree to which the phenomenon occurs across diverse types of problems, (2) intensity, or the degree to which it is manifest among consumers of a group decision regardless of decision quality, and (3) integrativeness, or its "goodness of fit" with existing research findings concerning the process of communication from groups to individuals. If future research proceeds along one or all of these lines, the hydra phenomenon will go beyond a mere observation about groups to a variable of importance in construction of small group theory. At present, small group research suffers from a critical imbalance; the majority of effort has been expended on such questions as the interaction of member's personality attributes within groups, while relatively little effort has been directed toward questions of the communication among groups and the social systems within which they operate. In a democratic society, these questions are as crucial for decision making policies as they are for theoretical import.

TABLE 1

SIGNIFICANCE TESTS AND GROUP MEANS FOR DECISION QUALITY ITEMS

	Single-Authored Means	Group-Authored Means
1. The decision is high in quality	2.91	3.44*
2. The solution is useful	3.00	3.34
3. The decision is practical	3.00	3.50*
4. The decision will not have a significant impact on university life	3.30	2.96
5. The decision is a positive approach to the problem	2.94	3.28
6. The decision is interesting	3.05	3.38*
7. The decision is controversial	3.15	3.42
	(N = 80)	(N = 81)

* = significant difference, t-tests for independent samples, $p < .01$

TABLE 2

MEANS AND STANDARD DEVIATIONS OF CREDIBILITY RATINGS OF DECISION AUTHOR(S)

Item	$\bar{X}$ for individual	S.D.	$\bar{X}$ for group	S.D.
1. I think that the author(s) of this decision can be relied upon to make a good quality decision in the future.	2.93	.90	3.03	.81
2. The author(s) of this decision is/ are close-minded.	3.04	1.03	2.71	.95
3. The author(s) of this decision is/ are generally competent.	3.06	1.11	3.34	.86
4. The author(s) of this decision is/ are more emotional than rational.	3.17	1.18	2.82	.90
5. The author(s) of this decision failed to take all evidence into account.	3.08	1.18	2.86	.97
6. The author(s) of this decision favored the views of the administration.	3.20	1.26	3.36	1.10
	(N = 80)		(N = 81)	

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